CELL SEARCH INDEX

BIO RESOURCE CENTER

Cell No.	RCB1127
Cell name	MC3T3-G2/PA6
Comment: English	Support hemopoietic stem cell and osteoclast differentiation. Pre-adipocyte.
Comment: Japanese	脂肪細胞に分化する。IL-7を産生しない。造血幹細胞の増殖・分化を支持し、破骨細胞の分化も支持する。
Animal	mouse, C57BL/6
Tissue derived	newborn, calvaria
Morophology	fibroblast-like
Medium and additives	MEM ALPHA+10%FBS
Antibiotics conc.	Free
Growth Temperature	37℃
CO2 concentration	5%
Method of subculture	0.25% trypsin
Subculture frequency	once/week
Anchorage dependency	Yes
Cloned	No
Mycoplasma	-
Isozyme analysis	LD, NP
Originator	Kodama, Hiroaki
Depositor	Kodama, Hiroaki
Restriction	a

<<English>>
No restriction.

<<Japanese>>
使用制限なし。

Reference <<English>>
1846 1847

User's Publication <<English>>
2274

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Cell Lines

ATCC Number:	**CRL-2749** Order this item	**Price:**	**$224.00**
Designation:	**OP9**	**Depositors:**	T Nakano
Biosafety Level:	1	**Shipped:**	frozen
Medium & Serum:	See Propagation	**Growth Properties:**	adherent
Organism:	*Mus musculus* (mouse)	**Morphology:**	fibroblast
Source:	**Organ:** bone marrow **Tissue:** stroma		

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Related Cell Culture Products

Applications:	supports hematopoietic differention
Strain:	(C57BL/6 x C3H)F2 -op/op
Age:	newborn newborn
Comments:	The **OP9** cell line was established from newborn op/op mouse calvaria. The cells do not produce functional macrophage colony-stimulating factor (M-CSF) due to an osteopetrotic mutation in the gene encoding M-CSF. The presence of M-CSF had inhibitory effects on the differentiation of embryonic stem (ES) cells to blood cells other than macrophages. **OP9** cells can be used to coculture mouse embryonic stem cells (ES cells) to induce the differentiation of embryonic stem (ES) cells into blood cells of erythroid, myeloid, and B cell lineages. Cocultivation with **OP9** does not require exogenous growth factors or complex embryoid structures. This system will facilitate the study of molecular mechanisms involved in development and differentiation of hematopoietic cells.
Propagation:	**ATCC complete growth medium:** Alpha minimum essential medium without ribonucleosides and deoxyribonucleosides with 2 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate, 80%; fetal bovine serum, 20% **Temperature:** 37.0 C **Atmosphere:** air, 95%; carbon dioxide (CO2), 5%

Subculturing:	**Protocol:** Note: Cell density is important. If the subculture ratio is too low, the culture will not reach confluence. However, do not overgrow. Very large cells tend to appear after overgrowth and these cells are a warning sign that the **OP9** cells will not support the maintenance of hematopoietic cells. Subculture just before confluence. 1. Remove and discard culture medium. 2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin- 0.53 mM EDTA solution to remove all traces of serum that contains trypsin inhibitor. 3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37−C to facilitate dispersal. 4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting. 5. Add appropriate aliquots of the cell suspension to new culture vessels. 6. Incubate cultures at 37−C. **Interval:** Maintain cultures at a cell concentration between 4 X 10(3) and 1 X 10(4) cells/cm2. **Subcultivation Ratio:** A subcultivation ratio of 1:4 to 1:5 is recommended **Medium Renewal:** Every 2 to 3 days
Preservation:	**Freeze Medium:** Complete growth medium supplemented with 5% (v/v) DMSO **Storage temperature:** liquid nitrogen vapor phase
Doubling Time:	26 hrs
Related Products:	recommended serum - ATCC 30-2020
References:	61302: Nakano T , et al. Generation of lymphohematopoietic cells from embryonic stem cells in culture. Science 265: 1098-1101, 1994. PubMed: 8066449 64482: Nakano T , et al. In vitro development of primitive and definitive erythrocytes from different precursors. Science 272: 722-724, 1996. PubMed: 8614833 64484: Nakano T . Lymphohematopoietic development from embryonic stem cells in vitro. Semin. Immunol. 7: 197-203, 1995. PubMed: 7579206 64485: Motoyama N , et al. bcl-x prevents apoptotic cell death of both primitive and definitive erythrocytes at the end of maturation. J. Exp. Med. 189: 1691-1698, 1999. PubMed: 10359572 64486: Nakano T . In vitro development of hematopoietic system from mouse embryonic stem cells: a new approach for embryonic hematopoiesis. Int. J. Hematol. 65: 1-8, 1996. PubMed: 8990620 64487: Nakano T , et al. Development of erythroid cells from mouse embryonic stem cells in culture: potential use for erythroid transcription factor study. Leukemia 3: 496-500, 1997. PubMed: 9209437 64488: Suwabe N , et al. GATA-1 regulates growth and differentiation of definitive erythroid lineage cells during in vitro ES cell differentiation. Blood 92: 4108-4118, 1998. PubMed: 9834216 64489: Suzuki A , Nakano T . Development of hematopoietic cells from embryonic stem cells. Int. J. Hematol. 73: 1-5, 2001. PubMed: 11372743 64490: Eto K , et al. Megakaryocytes derived from embryonic stem cells implicate CalDAG-GEFI in integrin signaling. Proc. Natl. Acad. Sci. USA 99: 12819-12824, 2002. PubMed: 12239348

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Cell Lines

ATCC Number:	CRL-1658 Order this item	**Price:**	$179.00
Designation:	NIH/3T3	**Depositors:**	SA Aaronson
Biosafety Level:	1	**Shipped:**	frozen
Medium & Serum:	See Propagation	**Growth Properties:**	adherent
Organism:	*Mus musculus* (mouse)	**Morphology:**	fibroblast PHOTO
Source:	**Organ:** embryo		

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Related Cell Culture Products

Virus Susceptibility:	murine sarcoma viruses; murine leukemia viruses [22370]
Strain:	NIH/Swiss
Age:	embryo
Comments:	The NIH/3T3, a continuous cell line of highly contact-inhibited cells was established from NIH Swiss mouse embryo cultures in the same manner as the original random bred 3T3 (ATCC CCL-92) and the inbred BALB/c 3T3 (ATCC CCL-163). [22370] The established NIH/3T3 line was subjected to more than 5 serial cycles of subcloning in order to develop a subclone with morphologic characteristics best suited for transformation assays. These cells are useful for DNA transfection and transformation studies. [26134] Tested and found negative for ectromelia virus (mousepox).
Propagation:	**ATCC complete growth medium:** Dulbecco's modified Eagle's medium with 4 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate and 4.5 g/L glucose, 90%; bovine calf serum, 10%

	Temperature: 37.0 C **Atmosphere:** air, 95%; carbon dioxide (CO2), 5%
Subculturing:	**Protocol:** 1. Remove and discard culture medium. 2. Briefly rinse the cell layer with 0.25% (w/v) Trypsin- 0.53 mM EDTA solution to remove all traces of serum which contains trypsin inhibitor. 3. Add 2.0 to 3.0 ml of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37—C to facilitate dispersal. 4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting. 5. Add appropriate aliquots of the cell suspension to new culture vessels. 6. Incubate cultures at 37—C. DO NOT ALLOW THE CELLS TO BECOME CONFLUENT, SUBCULTURE AT LEAST TWICE PER WEEK at 80% CONFLUENCY OR LESS. The serum used is important in culturing this line. Calf serum is reommmended and not fetal bovine serum. The calf serum initially employed and found to be satisfactory was from the Colorado Serum Co. Denver. **Subcultivation Ratio:** Inoculate 3 to 5 X 10(3) cells/cm2 **Medium Renewal:** Twice per week
Preservation:	**Freeze Medium:** Complete growth medium supplemented with 5% (v/v) DMSO **Storage temperature:** liquid nitrogen vapor phase
Related Products:	Recommended medium (without the additional supplements or serum described under ATCC Medium) - ATCC 30-2002
References:	22370: Jainchill JL , et al. Murine sarcoma and leukemia viruses: assay using clonal lines of contact-inhibited mouse cells. J. Virol. 4: 549-553, 1969. PubMed: 4311790 26133: Andersson P , et al. A defined subgenomic fragment of in vitro synthesized Moloney sarcoma virus DNA can induce cell transformation upon transfection. Cell 16: 63-75, 1979. PubMed: 84715 26134: Copeland NG , Cooper GM . Transfection by exogenous and endogenous murine retrovirus DNAs. Cell 16: 347-356, 1979. PubMed: 222457 28301: Loffler S , et al. CD9, a tetraspan transmembrane protein, renders cells susceptible to canine distemper virus. J. Virol. 71: 42-49, 1997. PubMed: 8985321 32372: Berson JF , et al. A seven-transmembrane domain receptor involved in fusion and entry of T-cell-tropic human immunodeficiency virus type 1 strains. J. Virol. 70: 6288-6295, 1996. PubMed: 8709256 32478: Jones PL , et al. Tumor necrosis factor alpha and interleukin-1beta regulate the murine manganese superoxide dismutase gene through a complex intronic enhancer involving C/EBP-beta and NF-kappaB. Mol. Cell. Biol. 17: 6970-6981, 1997. PubMed: 9372929 32502: Gonzalez Armas JC , et al. DNA immunization confers protection against murine cytomegalovirus infection. J. Virol. 70: 7921-7928, 1996. PubMed: 8892915 32522: Sless DC , et al. Exceptional fusogenicity of chinese hamster ovary cells with murine retrovirus suggests roles for cellular factor(s) and receptor clusters in the membrane fusion process. J. Virol. 70: 3432-439, 1996. PubMed: 8648675 32547: Jang SI , et al. Activator protein 1 activity is involved in the regulation of the cell type-specific expression from the proximal promoter of the human profilaggrin gene. J. Biol. Chem. 271: 24105-24114, 1996. PubMed: 8798649 32557: Medin JA , et al. Correction in trans for Fabry disease: expression, secretion, and uptake of alpha-galactosidase A in patient-derived cells driven by a high-titer recombinant retroviral vector. Proc. Natl. Acad. Sci. USA 93: 7917-7922, 1996. PubMed: 8755577 32568: Lee JH , et al. The proximal promoter of the human transglutaminase 3 gene. J. Biol. Chem. 271: 4561-4568, 1996. PubMed: 8626812 32582: Chang K , Pastan I . Molecular cloning of mesothelin, a differentiation antigen present on mesothelium, mesotheliomas, and ovarian cancers. Proc. Natl. Acad. Sci. USA 93: 136-140, 1996. PubMed: 8552591 32702: Cranmer LD , et al. Identification, analysis, and evolutionary relationships of the putative murine cytomegalovirus homologs of the human cytomegalovirus UL82 (pp71) and UL83 (pp65) matrix phosphoproteins. J. Virol. 70: 7929-7939, 1996. PubMed: 8892916 32724: Shisler J , et al. Induction of susceptibility to tumor necrosis factor by E1A is dependent on binding to either p300 or p105-Rb and induction of DNA synthesis. J. Virol. 70: 68-77, 1996. PubMed: 8523594 32756: Cavanaugh VJ , et al. Murine cytomegalovirus with a deletion of genes spanning HindIII-J and

	-I displays altered cell and tissue tropism. J. Virol. 70: 1365-1374, 1996. PubMed: 8627652 32905: Westerman KA , Leboulch P . Reversible immortalization of mammalian cells mediated by retroviral transfer and site-specific recombination. Proc. Natl. Acad. Sci. USA 93: 8971-8976, 1996. PubMed: 8799138

Cell Lines

ATCC Number: CRL-2655 Order this item

Price: $224.00

Designation: 20.3 [TAb 250]

Depositors: Berlex Laboratories, Inc.

Biosafety Level: 1 **Shipped:** frozen

Isotype: IgG1; kappa light chain

Medium & Serum: See Propagation

Growth Properties: suspension

Organism: *Mus musculus* (B cell); *Mus musculus* (myeloma) (mouse (B cell); mouse (myeloma))

Morphology: lymphoblast

Source: **Cell type:** hybridoma; lymphocyte

Cellular Products: Immunoglobulin; monoclonal antibody; against human c-erb B2 protein

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Related Cell Culture Products

Tumorigenic:	yes, in pristane primed BALB/c mice
Comments:	Animals were immunized with **NIH3T3** cells transfected with the human c-erb B2 oncogene. Spleen cells were fused with P3X63Ag8.653 mouse myeloma cells. The hybridoma cell line named 20.3 produces monoclonal antibody TAb 250. [53337] The TAb 250 monoclonal antibody is specific for an extracellular epitope of the c-erbB-2 protein (gp185). It inhibits in a dose-dependent manner the in vitro proliferation of human breast tumor cell lines that overexpress c-erbB-2. [56131] A culture deposited with the ATCC as HB-10646 in January of 1991 was found to be contaminated with mycoplasma. Progeny were cured by a 21-day treatment with BM Cycline. The cured cell line is available as CRL-2655. The original patent deposit is available as HB-10646.
Propagation:	**ATCC complete growth medium:** Iscove's modified Dulbecco's medium with 4 mM L-glutamine adjusted to contain 1.5 g/L sodium bicarbonate, 80%; fetal bovine serum, 20% **Temperature:** 37.0 C
Subculturing:	Cultures can be maintained by the addition of fresh medium or replacement of medium. Alternatively, cultures can be established by centrifugation with subsequent resuspension at 2 X 10 exp5 viable cells/ml. Maintain cell density between 1 X 10 exp5 and 1 X 10 exp6 viable cells/ml.
Preservation:	culture medium 95%; DMSO, 5%

Related Products:	Recommended medium (without the additional supplements or serum described under ATCC Medium) - ATCC 30-2005 recommended serum - ATCC 30-2020
References:	53337: Shawver LK , et al. Anti-neoplastic drugs in cancer therapy. US Patent 6,123,939 dated Sep 26 2000 56131: Hancock MC , et al. A monoclonal antibody against the c-erbB-2 protein enhances the cytotoxicity. Cancer Res. 51: 4575-4580, 1991. PubMed: 1678683

Cell Lines

ATCC Number: HB-11601 [Order this item] **Price:** $290.00

Designation: Ab 21.1 **Depositors:** Aronex Pharmaceuticals Inc.

Biosafety Level: 1 **Shipped:** frozen **Isotype:** IgG1

Medium & Serum: See Propagation **Growth Properties:** suspension

Organism: *Mus musculus* (B cell); *Mus musculus* (myeloma) (mouse (B cell); mouse (myeloma)) **Morphology:** lymphoblast

Source: **Cell type:** hybridoma; B lymphocyte

Cellular Products: Immunoglobulin; monoclonal antibody; against human erbB-2 protein

Permits/Forms: In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.

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Related Cell Culture Products

Tumorigenic:	yes; forms ascites in pristane primed BALB/c mice
Comments:	Animals were immunized with membrane preparations of NIH3T3 cells engineered to overproduce erbB protein. Spleen cells were fused with P3X8g8.653 myeloma cells. The antibody reacts with the extracellular domain of gp185erbB-2. In vitro and in vivo the antibody has no effect upon N87 cells (an erbB overexpressing human gastric carcinoma). However, in combination with Ab 23.1 (see ATCC HB-11602) in vitro growth of N87 is suppressed and in vivo N87 xenografts can prevented or be caused to regress by a combination of the two antibodies. The antibodies induces autophosphoryaltion of the gp185erbB-2 protein.
Propagation:	**ATCC complete growth medium:** Dulbecco's modified Eagle's medium with 4.5 g/L glucose, 100 units/ml penicillin and 0.1 mg/ml streptomycin, 74%; NCTC 109 medium, 10%; Hybridoma Cloning Factor, 1%; fetal bovine serum, 15%
Subculturing:	Cultures can be maintained by addition or replacement of fresh medium. Start cultures at 2 X 10 exp5 cells/ml and maintain between 1 X 10 exp5 and 1 X 10 exp6 cells/ml.

References:	22128: King CR , et al. Anti-erbB-2 antibodies, combinations thereof, and therapeutic and diagnostic uses thereof. US Patent 5,587,458 dated Dec 24 1996

Cell Lines

ATCC Number:	**HB-11602** Order this item	**Price:**	**$290.00**
Designation:	Ab 23.1	**Depositors:**	Aronex Pharmaceuticals Inc.
Biosafety Level:	1 **Shipped:** frozen	**Isotype:**	IgG1
Medium & Serum:	See Propagation	**Growth Properties:**	suspension
Organism:	*Mus musculus* (B cell); *Mus musculus* (myeloma) (mouse (B cell); mouse (myeloma))	**Morphology:**	lymphoblast
Source:	**Cell type:** hybridoma; B lymphocyte		
Cellular Products:	immunoglobulin; monoclonal antibody; against human erbB-2 protein		
Permits/Forms:	In addition to the MTA mentioned above, other ATCC and/or regulatory permits may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please click here for information regarding the specific requirements for shipment to your location.		

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Related Cell Culture Products

Tumorigenic:	yes; forms ascites in pristane primed BALB/c mice
Comments:	Animals were immunized with membrane preparations of NIH3T3 cells engineered to overproduce erbB protein. Spleen cells were fused with P3X8g8.653 myeloma cells. The antibody reacts with the extracellular domain of gp185erbB-2. In vitro and in vivo the antibody has no effect upon N87 cells (an erbB overexpressing human gastric carcinoma). However, in combination with Ab 21.1 (see ATCC HB-11601) in vitro growth of N87 is suppressed and in vivo N87 xenografts can prevented or be caused to regress by a combination of the two antibodies. The antibodies induce autophosphoryaition of the gp185erbB-2 protein.
Propagation:	**ATCC complete growth medium:** Dulbecco's modified Eagle's medium with 4.5 g/L glucose, 100 units/ml penicillin and 0.1 mg/ml streptomycin, 74%; NCTC 109 medium, 10%; Hybridoma Cloning Factor, 1%; fetal bovine serum, 15%
Subculturing:	Cultures can be maintained by addition or replacement of fresh medium. Start cultures at 2 X 10 exp5 cells/ml and maintain between 1 X 10 exp5 and 1 X 10 exp6 cells/ml.
References:	22128: King CR , et al. Anti-erbB-2 antibodies, combinations thereof, and therapeutic and diagnostic uses thereof. US Patent 5,587,458 dated Dec 24 1996

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